

REMARKS

In response to the Office Action mailed 12 October 2006, the Applicants respectfully request the Examiner to reconsider the above-captioned application in view of the above amendments and the following comments.

In the Office Action, claims 1-21 were rejected. Claims 1, 2, 9, 13 and 19 have been amended. Upon entry of the amendments, claims 1-21 will be pending in the present patent application. As will be discussed further below, these amendments are made to more particularly point out and specify the claimed subject matter. Reconsideration and allowance of all pending claims are respectfully requested.

Rejection of Claims 1, 9, 13, 19 and 21 under 35 U.S.C. §102(e)

The Examiner has rejected independent Claims 1, 9, 13 and 19, as well as Claim 21 which depends from Claim 19, as being anticipated by U.S. Patent No. 6,539,267 to Eryurek et al (hereinafter "Eryurek"). The Applicants respectfully traverse this rejection, because Eryurek does not show every recited limitation of the rejected claims. However, in an effort to make explicit the distinction between the Applicants claims and Eryurek, the Applicants have amended independent Claims 1, 9 13 and 19 in order to more clearly recite the distinction between the Applicants' Claims and the cited art.

The Applicants note that each of the rejected claims either includes, or is based upon an independent claim that includes, a recited element of discerning, from a body of collected information, that a parameter in that data, which was previously unknown or unconfirmed to affect the performance of the monitored system, does in fact affect the performance of the system. The exact recitation of this limitation varies slight among the independent claims, but such a limitation is found explicitly in Claims 1, 9, 13 and 19.

The Applicants have previously argued that the term "discerning", as used in the Applicants' specification, implied these limitations. The Examiner maintained that "discerning" required only "perceiving" or "monitoring". While the Applicants believe that paragraph 0017 and 0018 of their specification make clear that "discerning" requires

more than merely monitoring a variable, the claims have none-the-less been herein amended to make explicit the limitations that the Applicants intend to define the claimed elements.

With this amendment, the recitation that discerning requires a recognition or determination that a monitored parameter has an effect upon system performance that was not previously known or confirmed is now explicit within every independent claim pending in this application.

As amended, independent Claims 1, 9, 13 and 19 each recite elements not found in Eryurek. Specifically, Claim 1 recites, in part "discerning from the data that at least one parameter represented in the collected data affects system performance which parameter was previously unknown or unconfirmed to affect system performance". Claim 9 recites, in part "a data processor configured to discern from the at least one operating variable that at least one parameter represented in the sensed data affects the performance of the monitored device which parameter was previously unknown or unconfirmed to affect system performance". Claim 13 recites, in part "a data processor configured to discern from the at least one operating variable that a parameter represented in the sensed data affects performance which parameter was previously unknown or unconfirmed to affect performance". Claim 19 recites, in part "means for discerning from the data profiles that at least one parameter represented in the data profiles affects system performance which parameter was previously unknown or unconfirmed to affect performance".

The Applicants note that Eryurek does describe systems that perform statistical analysis of monitored variables. However, the systems of Eryurek do so in order to determine the occurrence of "events". For instance, in the portion of the reference cited by the Examiner, Eryurek states: "The computing circuitry provides an event output related to an event in the process control system based upon the evaluation of the rules." (Col. 1, lines 59-61.) As this states, the analysis is used to determine the occurrence of an event, not to identify a new parameter that has an effect upon performance, as recited in the Applicants' claims.

This is reinforced in other language within Eryurek. Column 5, line 54 to column 6, line 2 explains that sensitivity parameters are used to evaluate whether the behavior of the statistical parameters generated from the monitored process signals are within "an acceptable range or relationship as determined by the appropriate rule between the calculated statistical parameters 84 and the appropriate trained values 78." (Col. 5, lines 57-59.) Eryurek further states that such parameters may come from various sources, such as being "set by the manufacturer, received over loop 6 or input using input circuitry 76. The sensitivity parameters are adjusted for the specific application." Because such parameters are specific to the application, and must be put in place prior to the operation of the system described in Eryurek, they cannot be used to identify previously unrecognized parameters that have an effect on system performance, as recited in the Applicants' claims.

The focus on identifying operational events, rather than parameters, is also found in the figures of the Eryurek patent. In particular, the Examiner cites Figure 2, which illustrates a system that operates upon process signals and outputs (identifies) the occurrence of process events. Identification of parameters is not found in the system shown, or the process described within the text for the operation of this system. Similarly, looking at the process identified in Figure 6 for the operation of the systems in Eryurek's patent, it can be seen that the possible actions taken in the process never include identifying a previously unknown parameter that is now recognized to affect system performance. The actions do include identifying a component (associated with an event), identifying a condition (when the condition was already known to have a particular process signal behavior), or signaling an operator as to an unknown condition in the operation of the system. None of the outputs addresses identifying a monitored parameter in any way.

Because the system described and shown in Eryurek does not include every recited element of the independent claims, the Applicants submit that the rejection under §102 of Claims 1, 9, 13 and 19 is inapplicable to these Claims as amended. Because Claim 21 depends from Claim 19 and includes all recited limitations of Claim 19, the

Applicants submit that the rejection of Claim 21 is inapplicable to the amended claim set as well. The Applicants therefore request that the Examiner withdraw the rejection of Claims 1, 9, 13, 19 and 21, and pass these claims to allowance.

Rejection of Claims 2-8, 10-12, 14-18 and 20 under 35 U.S.C. §103

The Examiner has rejected Claims 2-8, 10-12, 14-18 and 20 as being unpatentable over the Warrior reference and U.S. Patent No. 6,847,854 to Discenzo. The Applicants respectfully traverse this rejection as applied to the amended claim set for the reasons discussed below.

The Applicants note that every claim rejected under §103 depends ultimately from Claim 1, 9, 13 or 19, which are not rejected under §103. As discussed above, these independent claims have been amended, and as amended, the Applicants submit that they are patentable. Because each of the claims rejected under §103 includes all of the limitations of at least one of Claims 1, 9, 13 or 19, the Applicants submit that each of these claims is therefore allowable on the basis of the allowability of its base claim.

In particular, the Applicants note that in the Examiner's rejection, the elements recited as being present do not include the feature of discerning that a previously unknown or unconfirmed parameter has an affect on performance on the basis of the monitored data. While Discenzo and Warrior in combination include the monitoring of parameters and the identification of parameters that exceed predetermined thresholds, nowhere in either reference is the identification of an unknown parameter as relevant to system performance shown.

Because each of the rejected claims includes elements that are not taught, either singly or in combination, by the cited references, the Applicants submit that the rejection of Claims 2-8, 10-12, 14-18 and 20 under §103 is inapplicable to the claim set as amended. The Applicants therefore request that the Examiner withdraw the rejection of these claims under §103 and pass these claims to allowance.

Conclusion

In view of the remarks and amendments set forth above, Applicants submit that all pending claims are now in a condition for allowance, and respectfully request allowance of the pending claim set. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,


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Date